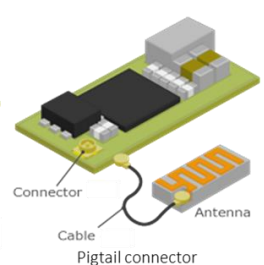
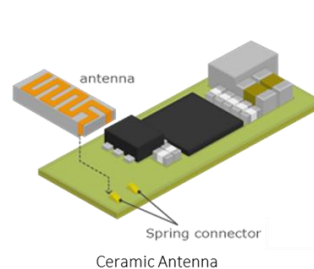
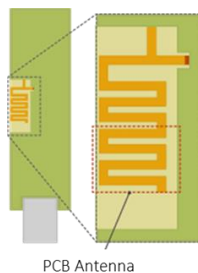


IoT FOR COMMUNICATION ENGINEERS



All IoT solutions cannot be built on the same communication backbone because the technology and financial constraints are solution dependant. For Wide Area connectivity, 5G technology provides significantly higher uplink bandwidth for a class of IoT applications where the devices can have higher power budgets. For large fleets of devices operating across multiples circles, but with lower bandwidth requirements, a service provider can offer a Narrow Band IoT (NB-IoT) network or a Long Range (LORA) network. Sigfox is more suitable for even lower bandwidth IoT applications seeking to move away from monthly billing commitments. For IoT applications where the device movement is limited within fixed boundaries, enterprises may choose to operate their private LORA or (Wireless for Smart Utility Networks) Wi-SUN networks. For Local Area or Personal Area connectivity, radios like Wi-Fi, Low Power Bluetooth (BLE) or Zigbee provide the radio access. Communication stacks like Thread bridges provide interoperability across these radios.

Most IoT devices are battery operated and wireless transmissions are expensive operations. Therefore optimal antenna design choices that can balance between cost, range, redundancy and power requirements are critical for the entire solution to operate.



Capsule Labs is founded by IoT industry veterans and offers foundational IoT projects to develop a better understanding of IoT solution. With our wireless kit you can create projects to understand the challenges a wireless environment.